



Scuola superiore Sant'Anna di studi e di perfezionamento



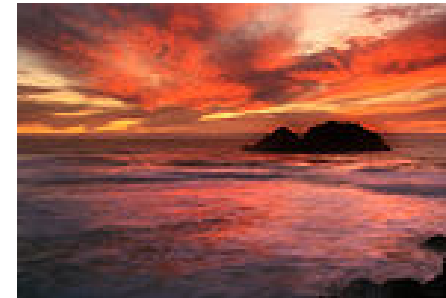
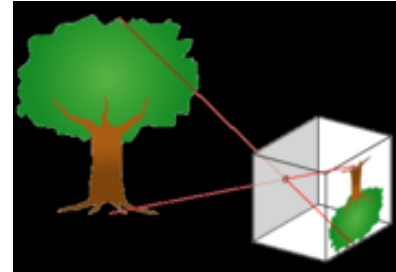
Applied Optics and Propagation (POA)

Ernesto Ciaramella



Course Content

- Electro-magnetic waves are the key means of today communication networks
- This course will provide the fundamentals of electromagnetic fields, and present in detail the applications
- The course provides the fundamentals of geometrical optics (refraction and reflection, lenses, microscopes etc.), of wave optics (interference, diffraction, polarization) and quantum optics (concept of photon emission properties / absorption of light, lasers) .





Applied Optics and Propagation

- Aim:
 - to introduce the fundamentals of lightwaves and radiowaves, which are key elements in today communication systems
 - deals with the different frameworks for electromagnetic description (from ray optics to quantum optics)
- Course Responsible: Prof. Ernesto Ciaramella
- Semester: 1
- Credits: 6 ECTS
- Exam: Written test



Topics

- The course will provide the basic concepts about the nature and use of electromagnetic fields, which are the basis of wired and wireless telecommunications
- **fundamentals of applied optics**
 - introduces the concepts and fundamentals on lightwaves, their nature, their description and their physical characteristics
- also illustrates the main areas of application



Contact Information

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